Amendment to the Claims:

1. (Original) A nuclear camera system comprising:

a detector which acquires radionuclide event data;

an image processor which processes the event data to produce image data;

an image data storage medium which stores the image data; and

an image data processor which formats the image data for storage on the storage medium in an extensible and open data format.

2. (Original) The nuclear camera system of Claim 1, wherein the image data processor formats the image data in xml format.

3. (Original) The nuclear camera system of Claim 1 or 2, wherein the data format is self-descriptive.

4. (Original)The nuclear camera system of Claim 3, wherein the data format further comprises format definitions which are available with the image data.

5. (Original) The nuclear camera system of Claim 4, wherein a format definition describes the relationship between two or more pieces of image data.

6. (Original) The nuclear camera system of Claim 5, wherein the image data is stored in a data file; and wherein the image data file contains a pointer to a file storing a definition of the image data format.

7. (Original) The nuclear camera system of Claim 6, wherein the pointer is to an address of a file stored on the nuclear camera system.

8. (Original) The nuclear camera system of Claim 6, wherein the pointer is to a URL address where the image data definition file may be found.

9. (Currently Amended) [[The]] A nuclear camera system ~~of Claim 6, wherein~~ including:

a detector which acquires radionuclide emission data;

an image processor which processes the emission data to produce image data;

an image data storage medium which stores the image data;

an image data processor which is programmed to perform the steps of:

formatting the image data ~~file is of the form~~ in <image.xml> data file format,

creating ~~and wherein the~~ an image data file format definition ~~file is of the form~~ in <image.dtd> format which format definition describes a relationship among pieces of the image data,

storing the image data format definition in a format definition file,

storing the formatted image data in a data file which includes a pointer to the image data format definition file, and

storing collimator data in a collimators.xml data file, isotope data in a isotopes.xml data file, and energy window data in a energywindowsets.xml data file which each points to one of a corresponding control data format definition file collimators.dtd, isotopes.dtd, and energywindowsets.dtd; and

an acquisition controller which controls the detector to acquire the emission data and accesses control data including at least one of the collimator data, the isotope data, and the energy window data in the respective collimators.xml, isotopes.xml, and energywindowsets.xml data files.

10. (Original) A nuclear camera system comprising:

a detector which acquires radionuclide event data;

an image processor which processes the event data to produce image data;

an acquisition controller which acts to control the detector to acquire event data in accordance with a study protocol; and

a control data storage medium, coupled to the acquisition controller, which stores control data in an extensible and open data format.

11. (Original) The nuclear camera system of Claim 10, wherein the control data is stored in xml format.

12. (Currently Amended) [[The]] A nuclear camera ~~system of Claim 11, wherein the~~ including:

a detector which acquires radionuclide event data;

an image processor which processes the event data to produce image data;

a control data storage medium which stores control data ~~comprises~~ including at least one of ~~protocol data,~~ collimator data, isotope data, and energy window data; and

an acquisition controller which is coupled to the control data storage medium to access the control data and control the detector to acquire the event data.

13. (Currently Amended) The nuclear camera system of Claim 12, wherein the control data is [[of]] stored at least in one of ~~the forms of protocols.xml,~~ collimators.xml, isotopes.xml, and ~~energywindowsets.xlm~~ energywindowsets.xml form.

14. (Currently Amended) ~~The nuclear camera system of Claim 12, wherein the~~ A radiation based diagnostic imaging system including:

a detector which acquires radiation data;

an image processor which processes the radiation data to produce image data;

a control data storage medium, coupled to the acquisition controller, which stores the control data in an xml format; and

an acquisition controller which executes a script utilizing an xml file to control the acquisition of the [[event]] radiation data.

15. (Currently Amended) The ~~nuclear camera~~ system of Claim 14, wherein the xml file utilized by the script is a protocol file of the form <protocol.xml>.

16. (Currently Amended) The nuclear camera system of Claim 13, wherein [[an]] the at least one stored xml [[files]] file [[point]] points to a corresponding format definition file of one ~~at least one of the forms~~ of ~~protocols.dtd~~, collimators.dtd, isotopes.dtd, and energywindowsets.dtd.

17. (Original) A nuclear camera system comprising:

a detector which acquires radionuclide event data;

an image processor which processes the event data to produce image data;

an acquisition controller which acts to control the detector to acquire event data in accordance with a study protocol; and

a control data storage medium, coupled to the acquisition controller, which stores control data in xml format, the control data comprising xml files provided by the camera system manufacturer and xml files modified or created by a camera user.

18. (Original) The nuclear camera system of Claim 17, further comprising an image data storage medium, coupled to the image processor, which stores image data in xml format.

19. (Original) The nuclear camera system of Claim 18, further comprising a user interface and a server, responsive to the user interface and coupled to the control data storage medium and the image data storage medium, which accesses xml control data files or xml image data files in response to user commands.

20. (Original) ~~The nuclear camera~~ A diagnostic imaging system ~~of Claim 19, wherein the~~ including:

a detector which acquires diagnostic data;

an image processor which processes the diagnostic data to produce image data;

an acquisition controller which controls the detector to acquire diagnostic data;

a control data storage medium, coupled to the acquisition controller, which stores control data in xml format;

an image data storage medium, coupled to the image processor, which stores image data in xml format; and

a server coupled to the control data storage medium and the image data storage medium, which server accesses at least one of xml control data files and xml image data files and executes scripts which utilize xml control data files.

21. (Previously Presented) A nuclear camera system comprising:

a detector which acquires radionuclide event data;

an image processor which processes the event data to produce image data;

an acquisition controller which acts to control the detector to acquire event data in accordance with a study protocol, wherein the acquisition controller executes a script utilizing an xml file to control the acquisition of event data; and

a control data storage medium, coupled to the acquisition controller, which stores control data in an extensible and open data format.

22. (Currently Amended) A nuclear camera system comprising:

a detector which acquires radionuclide event data;

an image processor which processes the event data to produce image data;

an acquisition controller which acts to control the detector to acquire event data in accordance with a study protocol; [[and]]

a control data storage medium, coupled to the acquisition controller, which stores control data in xml format, the control data comprising xml files provided by the camera system manufacturer and xml files modified or created by a camera user[[.]]; and

a user interface and a server, responsive to the user interface and coupled to the control data storage medium and the image data storage medium, which accesses xml control data files or xml image data files in response to user commands wherein the server executes scripts which utilize xml control data files.